

What is claimed is:

1. An apparatus for creating a tract within the scleral tissues of an eye comprising:
 - 5 an elongated body portion shaped to create said tract wherein said tract forms a path for flow of aqueous humor into an ocular vein.
2. The apparatus of claim 1 wherein said body portion comprises a proximal end and distal end.
3. The apparatus of claim 2 wherein said body portion has an outer
10 diameter in the range of 50 to 500 microns.
4. The apparatus of claim 2 wherein said body portion comprises a flexible microcannula.
5. The apparatus of claim 2 wherein said distal end comprises a mechanical cutting tip.
- 15 6. The apparatus of claim 2, where in said distal end comprises an energy source to ablate tissue.
7. The apparatus of claim 6 wherein said energy comprises laser light, radio frequency energy, or thermal energy.
8. The apparatus of claim 2 where said distal end is visible by medical
20 imaging.
9. The apparatus of claim 8 wherein medical imaging comprises ultrasound or optical coherence topography.
10. The apparatus of claim 2 wherein said distal end comprises an optical beacon visible under direct observation through scleral tissues.
- 25 11. The apparatus of claim 2 wherein said body portion comprises an outer sheath and an inner member.
12. The apparatus of claim 11 wherein said inner member is removable during use from said outer sheath.
13. The apparatus of claim 1 which additionally comprises a space
30 maintaining material placeable within said tract.
14. The apparatus of claim 13 wherein said space maintaining material comprises hyaluronic acid.
15. The apparatus of claim 13 wherein said space maintaining material comprises a cellular proliferation inhibitor.

16. The apparatus of claim 15, wherein said cellular proliferation inhibitor comprises methotrexate, paclitaxel, or sirolimus.

17. The apparatus of claim 13, wherein said space maintaining material comprises an anti-thrombotic agent.

5 18. The apparatus of claim 20 wherein said anti-thrombotic agent comprises heparin or tissue plasminogen activator.

19. The apparatus of claim 13 wherein said material comprises a stent device.

10 20. The apparatus of claim 19 wherein said device comprises hyaluronic acid.

21. The apparatus of claim 19 wherein said device comprises a nickel titanium alloy.

22. The apparatus of claim 19 wherein said device is changeable in-situ from a first configuration to a second configuration.

15 23. A method for creating a path for flow of aqueous humor of the eye into an ocular vein comprising:

a) inserting an apparatus to form a tissue opening into an ocular vein on the anterior portion of the eye;

20 b) directing said apparatus to create a tract from said vein to a source of aqueous humor;

c) removing said apparatus;

d) closing said tissue opening while retaining flow through said tract between said vein and said source.

25 24. A method for creating a path for flow of aqueous humor of the eye into an ocular vein comprising:

a) inserting an apparatus through a tissue opening in the eye into a source of aqueous humor in the eye;

b) directing said apparatus to create a tract for said source into an ocular vein;

30 c) removing said apparatus while retaining flow through said tract between said vein and said source.

25. A method according to claim 24 further comprising the step (d) of closing said tissue opening.

26. The method of claim 23 and 24 wherein said source of aqueous humor comprises the anterior chamber, Schlemm's canal, collector channel, or bleb.

27. The method of claim 23 or 24 wherein in said step (b) medical imaging is used to direct the creation of said tract.

5 28. The method of claim 23 or 24, which additionally comprises the step of placing a space maintaining material within said tract.

29. The method of claim 28 wherein said material comprises hyaluronic acid.

10 30. The method of claim 28 wherein said material comprises a stent device.